

Application No. 10/750,575
Amendment dated October 10, 2006
In Response to final Office Action mailed May 9, 2006
Page 2 of 8

Amendment to the Claims

This listing of Claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently Amended) A liquid crystal display module, comprising:
 - a light source to generate light;
 - a light guide panel through which the light from the light source propagates, the light guide panel having a first refractive index;
 - a low refractive index layer disposed on the light guide panel, the low refractive index layer having a second refractive index which is lower than the first refractive index; and
 - a transmissive liquid crystal display panel disposed on an upper portion of the low refractive index layer, wherein the transmissive liquid crystal display panel includes an upper substrate facing the low refractive index layer with liquid crystal therebetween, and no substrate is disposed between the liquid crystal and the light guide panel.
2. (Original) The liquid crystal display module according to claim 1, wherein the light in the light guide panel is totally reflected at a border between the light guide panel and the low refractive index layer when the light in the light guide panel impinges on the border at an angle of: $90^\circ - \sin^{-1}(1/\text{the first refractive index}) > \sin^{-1}(\text{the second refractive index}/\text{the first refractive index})$.

3. (Original) The liquid crystal display module according to claim 1, wherein the first refractive index is 1.7 and the second refractive index is 1.35.

4. (Original) The liquid crystal display module according to claim 1, further comprising:

optical sheets disposed on the low refractive index layer; and
a polarizer disposed on the optical sheets to polarize light from the optical sheets.

5. (Canceled)

6. (Currently Amended) The liquid crystal display module according to claim 4, wherein the ~~transmissive liquid crystal display panel~~ includes an upper substrate facing faces the polarizer with liquid crystal therebetween to selectively transmit the light through the liquid crystal by driving the liquid crystal, and no substrate is disposed between the liquid crystal and the light guide panel.

7. (Original) The liquid crystal display module according to claim 1, further comprising:

a condenser disposed between the light source and the light guide panel.

8. (Original) The liquid crystal display module according to claim 7, wherein the light in the light guide panel is totally reflected at a border between the light guide panel and the low refractive index layer when the light in the light guide panel impinges on the border at an angle of: 90° –

condensed degree by the condenser > sin-1(the second refractive index/the first refractive index).

9. (Original) The liquid crystal display module according to claim 7, wherein the first refractive index is 1.5 and the second refractive index is 1.35.

10. (Original) The liquid crystal display module according to claim 7, further comprising:

optical sheets disposed on the low refractive index layer; and
a polarizer disposed on the optical sheets to polarize light from the optical sheets.

11. (Canceled)

12. (Currently Amended) The liquid crystal display module according to claim 10, wherein the ~~transmissive liquid crystal display panel includes an upper substrate facing faces~~ the polarizer with liquid crystal therebetween to selectively transmit the light through the liquid crystal by driving the liquid crystal, and no substrate is disposed between the liquid crystal and the light guide panel.

13. (Original) The liquid crystal display module according to claim 1, wherein the low refractive index layer is disposed on a first surface of the light guide panel, and a second surface of the light guide panel that opposes the first surface has a plurality of grooves to reflect light impinging on the grooves towards the transmissive liquid crystal display panel.

Application No. 10/750,575
Amendment dated October 10, 2006
In Response to final Office Action mailed May 9, 2006
Page 5 of 8

14. (Original) The liquid crystal display module according to claim 1, further comprising a reflective plate disposed below the light guide panel, the reflective plate reflecting light escaping from the light guide panel and traveling away from the low refractive index layer back towards the light guide panel and the low refractive index layer.

15-26. (Canceled)